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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Steven Roberds, et al.

Serial No.: 09/852,386

Group Art Unit: Not Yet Assigned

Filing Date: May 10, 2001

Examiner: Not Yet Assigned

For: HUMAN ION CHANNELS

DATE OF DEPOSIT: August 21, 2001  
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REGISTRATION NO.: 45,449

Assistant Commissioner for Patents  
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Dear Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).



In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in §1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first office action after the filing of request for continued examination under §1.114, no additional fee is required.

☐ In accordance with §1.129(a), this Information Disclosure Statement is being filed in connection with ☐the first or ☐second After Final Submission, therefore:

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☐ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.

☒ Copies of references listed on the attached Form PTO-1449 are enclosed herewith  
EXCEPT THAT:

☒ In view of the voluminous nature of references **AH-AI, AN, AX, BC, BF, BM, BW, BY, BZ, CB, CL, DG, DJ, DX, EF, and ES**, and the likelihood that these references are available to the Examiner, copies are not enclosed herewith.

- ☐ In accordance with §1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. §120 have been made in the instant application:
- ☐ Copies of references [list as appropriate] listed on the attached Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in prior application Serial No. , filed .
- ☐ If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

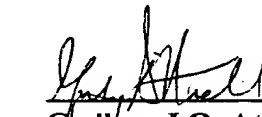
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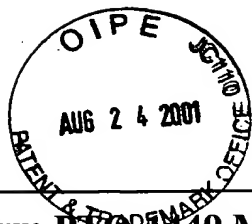
  
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<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. <b>PHRM-0325</b> <b>(00133.US1)</b>	Serial No. <b>09/852,386</b>
		Applicant <b>Steven L. Roberds, et al.</b>	
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<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	<b>AA</b>	Akane, A., et al., "direct dideoxy sequencing of genomic DNA by ligation-mediated PCR," <i>Biotechniques</i> , <b>1994</b> , 16(2), 238-241 (page 239 - advertisement)	
	<b>AB</b>	Altschul, S. F., et al., "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs," <i>Nucleic Acids Research</i> , <b>1997</b> , 25(17), 3389-3402	
	<b>AC</b>	Altschul, S. F., et al., "Basic local alignment search tool," <i>J. Mol. Biol.</i> , <b>1990</b> , 215, 403-410	
	<b>AD</b>	American Veterinary Medical Association, <i>Report of the American Veterinary Medical Assoc.</i> , Panel on Euthanasia, <i>Journal of American Veterinary Medical Assoc.</i> , <b>1993</b> , 202, 229-249	
	<b>AE</b>	Anderson, W.F., "Human gene therapy," <i>Nature</i> , Supplement to Vol. 392(6679), <b>1998</b> , 25-30	
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	<b>AG</b>	Aukrust, P., et al., "Enhanced levels of soluble and membrane-bound CD40 ligand in patients with unstable angina; Possible Reflection of T lymphocyte and platelet involvement in the pathogenesis of acute coronary syndromes," <i>Circulation</i> , <b>1999</b> , 100, 614-620	
*	<b>AH</b>	Ausubel, F. M., et al., <i>Short Protocols in Molecular Biology</i> , 4 <sup>th</sup> Ed., <b>1992</b> , Greene & Wiley-Interscience, New York	
*	<b>AI</b>	Ausubel, et al. (Eds.), <i>Current Protocols in Molecular Biology</i> , New York, <b>1987-1999</b> , John Wiley & Sons, Inc.	
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	<b>AK</b>	Baindur, N., et al., "Selective fluorescent ligands for pharmacological receptors," <i>Drug Dev. Res.</i> , <b>1994</b> , 33, 373-398	
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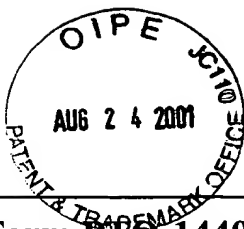
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	<b>AL</b>	Bang, H., et al., "TREK-2, a new member of the mechanosensitive tandem-pore K <sup>+</sup> channel family," <i>J. Biological Chem.</i> , 275(23), 2000, 17412-17419	
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*	<b>AN</b>	Berger, et al., <i>Guide to Molecular Cloning Techniques</i> , Methods in Enzymology 152, 1987, Academic Press, Inc., San Diego, CA	
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	<b>AQ</b>	Van Broeck, J.J.M., "G-protein-coupled receptors in insect cells," <i>Int. Rev. Cytology</i> , 1996, 164, 189-268	
	<b>AR</b>	Cane, D. E., et al., "Harnessing the Biosynthetic Code: Combinations, Permutations, and Mutations," <i>Science</i> , Oct. 1998, 282, 63-68	
	<b>AS</b>	Capecchi, M. R., "Altering the genome by homologous recombination," <i>Science</i> , 1989, 244, 1288-1292	
	<b>AT</b>	Chambers, R. C., et al., "Thrombin stimulates fibroblast procollagen production via proteolytic activation of protease-activated receptor 1," <i>Biochem J.</i> , 1998, 333, 121-127	
	<b>AU</b>	Choo, Y., et al., "Promoter-specific activation of gene expression directed by bacteriophage-selected zinc fingers," <i>J. Mol. Biol.</i> , 1997, 273, 525-532	
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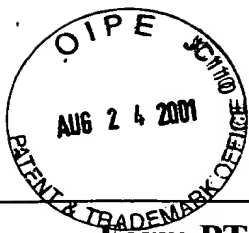
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	<b>AV</b>	Cicala, C., et al., "Bronchoconstrictor effect of thrombin and thrombin receptor activating peptide in guinea-pigs in vivo," <i>Br. J. Pharmacol</i> , <b>1999</b> , 126, 478-484	
	<b>AW</b>	Cirino, G., et al., "Thrombin functions as an inflammatory mediator through activation of its receptor," <i>J. Exp. Med.</i> , <b>1996</b> , 183, 821-827	
*	<b>AX</b>	Cobbold, et al., "Aequorin measurements of cytoplasmic free calcium," <i>In: McCormack J.G., et al. (Eds.), Cellular Calcium: A Practical Approach</i> , <b>1991</b> , Oxford, IRL Press	
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	<b>AZ</b>	Conley, E.C., "The Ion Channels FactsBook, Extracellular Ligand-Gated Channels," <i>Academic Press, London and San Diego</i> , <b>1995</b> , page 426	
	<b>BA</b>	Cosman, D., et al., "High Level Stable Expression of Human Interleukin-2 receptors in Mouse Cells Generates only Low Affinity Interleukin-2 Binding Sites," <i>Mol. Immunol.</i> , <b>1986</b> , 23(9), 935-941	
	<b>BB</b>	Cosman, D., et al., "Cloning sequence and expression of human interleukin-2 receptor," <i>Nature</i> , <b>1984</b> , 312, 768	
*	<b>BC</b>	Current Protocols in Molecular Biology, <i>John Wiley &amp; Sons, NY</i> , <b>1999</b>	
	<b>BD</b>	Cutting, G. R., "Cloning of the $\gamma$ -aminobutyric acid (GABA) $\rho$ 1cDNA: A GABA receptor subunit highly expressed in the retina," <i>Proc. Natl. Acad. Sci. USA</i> , April <b>1991</b> , 88, 2673-2677	
	<b>BE</b>	Dayoff, in <i>Atlas of Protein Sequence and Structure</i> , <b>1972</b> , National Biochemical Research Foundation, Washington, D.C., 5, 124	
*	<b>BF</b>	Di Wallis (Ed.), "Electrophysiology, A Practical Approach," <i>IRL Press at Oxford University Press</i> , <b>1993</b>	
	<b>BG</b>	DiCuccio, M. N., et al., "A functional tethered ligand thrombin receptor is present on human hematopoietic progenitor cells," <i>Exp. Hematol</i> , <b>1996</b> , 24, 914-918	
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	<b>BH</b>	Donovan, F. M., et al., "Thrombin induces apoptosis in cultured neurons and astrocytes via a pathway requiring tyrosin kinase and RhoA activities," <i>J. Neurosci.</i> , <b>1997</b> , <i>17(14)</i> , 5316-5326	
	<b>BI</b>	Douglas, A. M., et al., "Direct sequencing of double-stranded PCR products incorporating a chemiluminescent detection procedure," <i>Biotechniques</i> , <b>1993</b> , <i>14</i> , 824-828	
	<b>BJ</b>	Drmanac, R., et al., "DNA Sequence Determination by Hybridization A Strategy for Efficient Large-Scale Sequencing," <i>Science</i> , <b>1993</b> , <i>260</i> , 1649-1652 (sequencing by hybridization)	
	<b>BK</b>	Drmanac, S., et al., "Accurate sequencing by hybridization for DNA diagnostics and individual genomics," <i>Nature Biotechnology</i> , <b>1998</b> , <i>16</i> , 54-58	
	<b>BL</b>	Dunlop, J., et al., "Characterization of 5-HT <sub>1A</sub> receptor functional coupling in cells expressing the human 5-HT <sub>1A</sub> receptor as assessed with the cytosensor microphysiometer," <i>J. Pharmacological and Toxicological Methods</i> , <b>1998</b> , <i>40(1)</i> , 47-55	
*	<b>BM</b>	Eisenthal, R., et al. (Eds.) In Enzyme Assays, <i>A Practical Approach</i> , <b>1992</b> , Oxford University Press	
	<b>BN</b>	Fields, S., et al., "The two-hybrid system: an assay for protein-protein interactions," <i>Trends in Genetics</i> , <b>1994</b> , <i>10(8)</i> , 286-292	
	<b>BO</b>	Fields, S., et al., "A novel genetic system to detect protein-protein interactions," <i>Nature</i> , <b>1989</b> , <i>340</i> , 245-246	
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	<b>BP</b>	Fink, M. et al., "Cloning, functional expression and brain localization of a novel unconventional outward rectifier K <sup>+</sup> channel," <i>The EMBO Journal</i> , <b>1996</b> , 15(24), 6854-6862	
	<b>BQ</b>	Fischer, S. G., et al., "DNA fragments differing by single base-pair substitutions are separated in denaturing gradient gels: Correspondence with melting theory," <i>Proc. Natl. Acad. Sci. USA</i> , <b>1983</b> , 80, 1579-1583	
	<b>BR</b>	Friedmann, T., "Progress toward human gene therapy," <i>Science</i> , <b>1989</b> , 244, 1275-1281	
	<b>BS</b>	Gerhardt, C. C., et al., "Functional characteristics of heterologously expressed 5-HT receptors," <i>Eur. J. Pharmacology</i> , <b>1997</b> , 334, 1-23	
	<b>BT</b>	Gill, J. S., et al., "Thrombin induced inhibition of neurite outgrowth from dorsal root ganglion neurons," <i>Brain Res.</i> , <b>1998</b> , 797, 321-327	
	<b>BU</b>	Grabham, P., et al., Thrombin receptor activation stimulates astrocyte proliferation and reversal of stellation by distinct pathways: involvement of tyrosine phosphorylation," <i>J. Neurochem</i> , <b>1995</b> , 64, 583-591	
	<b>BV</b>	Greisman, H. A., et al., "A general strategy for selecting high-affinity zinc finger proteins for diverse DNA target sites," <i>Science</i> , <b>1997</b> , 275, 657-661	
*	<b>BW</b>	Harlow, et al. (Eds.), <i>Antibodies A Laboratory Manual</i> , <b>1988</b> , Cold Spring Harbor Laboratory; Cold Spring Harbor, New York	
	<b>BX</b>	Hauck, R. W., et al., "α-thrombin stimulates contraction of human bronchial rings by activation of protease-activated receptors," <i>Am J. Physiol</i> , <b>1999</b> , 277, L22-L29	
*	<b>BY</b>	Haugland, <i>Handbook of Fluorescent probes and Research Chemicals</i> , 6 <sup>th</sup> Ed., <b>1996</b> , Eugene OR: Molecular Probes	
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*	BZ	Hendrix, R.W., Ed., <i>Lambda II</i> , 1980, Cold Spring Harbor Press, Cold Spring Harbor, NY	
	CA	Henikoff, S., et al., "Amino acid substitution matrices from protein blocks," <i>Proc. Natl. Acad. Sci. USA</i> , 1992, 89, 10915-10919	
*	CB	Hershey, A. D., (Ed.), <i>The Bacteriophage Lambda</i> , 1973, Cold Spring Harbor Press, Cold Spring Harbor, New York	
	CC	Hill, D. C., "Trends in development of high-throughput screening technologies for rapid discovery of novel drugs," <i>Cur. Opinion Drug Disc. Dev.</i> , 1998, 1(1), 92-97	
	CD	Hodgson, J., "Receptor screening and the search for new pharmaceuticals," <i>Bio/Technology</i> , 1992, 10, 973-980	
	CE	Hoffman, M., et al., "Thrombin enhances monocyte secretion of tumor necrosis factor and interleukin-1 beta by two distinct mechanisms," <i>Blood Cells Mol Dis</i> , 1995, 21, 156-167	
	CF	Jan, L. Y. et al., "Voltage-gated and inwardly rectifying potassium channels," <i>J. of Physiology</i> , 1997, 505(2), 267-282	
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	CH	Karlin, S., et al., "Applications and statistics for multiple high-scoring segments in molecular sequences," <i>Proc. Natl. Acad. Sci. USA</i> , 1993, 90, 5873-5787	
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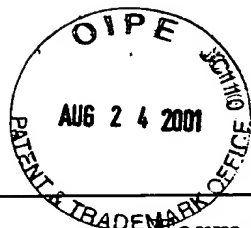


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	<b>CI</b>	Kieleczawa, J., et al., "DNA sequencing by primer walking with strings of contiguous hexamers," <i>Science</i> , <b>1992</b> , 258, 1787-1791	
	<b>CJ</b>	Kim, J., et al., "Design of TATA box-binding protein/zinc finger fusions for targeted regulation of gene expression," <i>Proc. Natl. Acad. Sci. USA</i> , <b>1997</b> , 94, 3616-3620	
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*	<b>CL</b>	Kruse et al. (eds.), in <i>Tissue Culture</i> , Academic Press, <b>1973</b>	
	<b>CM</b>	Kuntzweiler, T. A., et al., "Rapid assessment of ligand actions with nicotinic acetylcholine receptors using calcium dynamics and FLIPR," <i>Drug Development Research</i> , <b>1998</b> , 44(1), 14-20	
	<b>CN</b>	Lehninger, "Chapter 4, The amino acid building blocks of proteins," <i>Biochemistry</i> , 2 <sup>nd</sup> Ed., <b>1975</b> , Worth Publishers, Inc., New York, New York, 71-77	
	<b>CO</b>	Lesage F., et al., "Potassium ion channels, molecular structure, function, and diseases," in <i>Current Topics in Membranes</i> , <b>1999</b> , Kurachi, Y., et al. (Eds.), 46, 199-222	
	<b>CP</b>	Levin, E. D. et al., "AR-R 17779, an $\alpha 7$ nicotinic agonist, improves learning and memory in rats," <i>Behavioural Pharmacology</i> , <b>1999</b> , 10 (6/7), 675-780	
	<b>CQ</b>	Lin, A. H., et al., "The oxazolidinone eperezolid binds to the 50S ribosomal subunit and competes with binding of chloramphenicol and lincomycin," <i>Antimicrobial Agents and Chemotherapy</i> , <b>1997</b> , 41(10), 2127-2131	
	<b>CR</b>	Liu, Q., et al., "Design of polydactyl zinc-finger proteins for unique addressing within complex genomes," <i>Proc. Natl. Acad. Sci. USA</i> , <b>1997</b> , 94, 5525-5530	
*	<b>CS</b>	Lodish, H., et al., <i>Molecular Cell Biology</i> , 3 <sup>rd</sup> Ed., <b>1995</b>	
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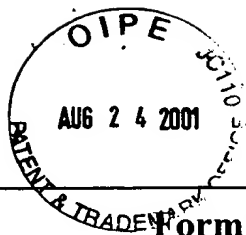


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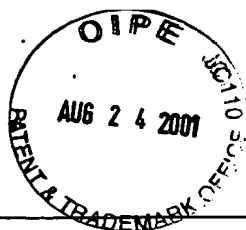


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		Applicant <b>Steven L. Roberds, et al.</b>	
		Filing Date <b>May 10, 2001</b>	Group <b>Not Yet Assigned</b>
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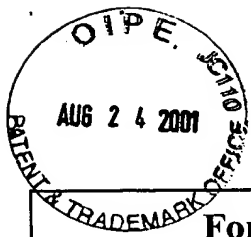


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Applicant  
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Filing Date  
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	<b>FA</b>	4,879,236	11/07/89	Smith, et al.	435	235
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